

App. Serial No. 10/531,932
Docket No.: NL021045US

In the Claims:

Please amend claims 1-14 as indicated below. This listing of claims replaces all prior versions.

1. *(Currently Amended)* A method for a predistortion linearization of a branched signal for a RF amplifier, comprising:

- [[-]] supplying an input signal to at least one input terminal (2);
- [[-]] distributing the input signal present on the at least one input terminal (2) to a plurality of parallel branch-circuits (16, 18, 20) as branched signals by a power distributing circuit (4);
- [[-]] controlling a phase parameter and/or an amplitude parameter of a first one of the branched signals by at least one nonlinear branch-circuit (18, 20) of the plurality of parallel branch-circuits;
- [[-]] controlling a phase parameter and an amplitude parameter of a second one of the branched signals by at least one linear branch-circuit (16) of the plurality of parallel branch-circuits;
- [[-]] combining output signals of the at least one nonlinear branch-circuit (18, 20) with the output signals of the at least one linear branch-circuit (16) by a power combining circuit (12); and
- [[-]] providing an a final output signal of a the predistortion unit from the power combining circuit (12) on at least one output terminal (14).

2. *(Currently Amended)* The method of claim 1, wherein the controlling of a phase parameter and/or an amplitude parameter of a first one of the branched signals by at least one nonlinear branch-circuit (18, 20) of the plurality of parallel branch-circuits comprises:

- [[-]] controlling [[a]] the phase parameter of [[a]] the first branched signal using [[by]] at least one phase control unit (6) and/or;
- [[-]] at least one of controlling [[an]] the amplitude parameter of [[a]] the first branched signal using [[by]] at least one linear amplitude control unit (8) and/or;

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[[[-]]] controlling [[an]] the amplitude parameter of [[a]] the first branched signal using [[by]] at least one nonlinear amplitude control unit (10).

3. *(Currently Amended)* The method of claim 1, wherein the controlling of a phase parameter and/or an amplitude parameter of a second one of the [[a]] branched signals by at least one linear branch-circuit (16) of the plurality of parallel branch-circuits comprises:

[[[-]]] at least one of controlling [[a]] the phase variation parameter of [[a]] the second branched signal using [[by]] at least one phase control unit (6) and/or;

[[[-]]] controlling [[an]] the amplitude parameter of [[a]] the second branched signal using [[by]] at least one linear amplitude control unit (8).

4. *(Currently Amended)* The method of claim 2, wherein at least one of the at least one linear amplitude control unit (8) and/or the at least one nonlinear amplitude control unit (10) are/is controlled depending on a power level of an input signal.

5. *(Currently Amended)* The method of claim 2, wherein at least one of the at least one linear (8) amplitude control unit and/or the at least one nonlinear amplitude control unit (10) are/is controlled depending on an external adjustable value.

6. *(Currently Amended)* The method of claim 1, wherein the at least one linear branch-circuit (16) amplitude control unit and/or the at least one nonlinear branch-circuit (18, 20) have their/its own specific RF power level from which their/its predistortion of amplitude and/or phase starts, which is defined by an individual nonlinear function.

7. *(Currently Amended)* A method for a predistortion linearization, in particular compensation of temperature of a linearized power module, where a varicap is a controlled element of an AM/AM compensation loop and an amplifier control element for AM/PM compensation, comprising:

[[[-]]] supplying an input signal to at least one input terminal (2);

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- [[[-]]] distributing the input signal present on the at least one input terminal (2) to a plurality of parallel branch-circuits (16, 18, 20) as branched signals by a power distributing circuit;
- [[[-]]] controlling a phase parameter and/or an amplitude parameter of a first one of the branched signals by at least one nonlinear branch-circuit (18, 20) of the plurality of parallel branch-circuits;
- [[[-]]] controlling at least one of a phase parameter and/or an amplitude parameter of a second one of the branched signals by at least one linear branch-circuit (16) of the plurality of parallel branch-circuits;
- [[[-]]] combining the an output signal of the at least one nonlinear branch-circuit (18, 20) with the an output signal of the at least one linear branch-circuit (16) by a power combining circuit (12); and
- [[[-]]] providing a final output signal of the a predistortion unit from the power combining circuit (12) on at least one output terminal (14).

8. *(Currently Amended)* An electronic device comprising a circuit for a predistortion unit linearizing a signal for a RF amplifier, comprising:

- [[[-]]] at least one input terminal (2) supplying an input signal;
- [[[-]]] a power distributing circuit (4) distributing the input signal present on the at least one input terminal (2) to a plurality of parallel branch-circuits (16, 18, 20) as branched signals;
- [[[-]]] at least one nonlinear branch-circuit (18, 20) of the plurality of parallel branch-circuits controlling a phase parameter and/or an amplitude parameter of a first one of the branched signals;
- [[[-]]] at least one linear branch-circuit (16) of the plurality of parallel branch-circuits controlling at least one of a phase parameter and/or an amplitude parameter of a second one of the branched signals;
- [[[-]]] a power combining circuit (12) combining output signals of the at least one nonlinear branch-circuit (18, 20) with the output signals of the at least one linear branch-circuit (16); and

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[[-]] at least one output terminal (14) providing an output signal of the predistortion unit from the power combining circuit (12).

9. *(Currently Amended)* The device of claim 8, wherein the at least one nonlinear branch-circuit (18, 20) comprises:

[[-]] at least one phase control unit (6) controlling the phase parameter of [[a]] the first branched signal and/or;

[[-]] at least one linear amplitude control unit (8) controlling the amplitude parameter of [[a]] the first branched signal and/or;

[[-]] at least one nonlinear amplitude control unit (10) controlling the amplitude parameter of [[a]] the first branched signal.

10. *(Currently Amended)* The device of claim 8, wherein the at least one linear branch-circuit (16) comprises:

[[-]] at least one phase control unit (6) controlling the phase parameter of [[a]] the second branched signal and/or;

[[-]] at least one linear amplitude control unit (8) controlling the amplitude parameter of [[a]] the second branched signal.

11. *(Currently Amended)* The device of claim 9, wherein the at least one nonlinear amplitude control unit (10) comprises at least one nonlinear element and at least one amplifier.

12. *(Currently Amended)* The device of claim 10, wherein the at least one linear amplitude control unit (8) [[is]] comprises at least one of a gain control amplifier (280), and/or an attenuator, and/or a resistor, and/or a dissipative transmission line and/or a controllable resistive component.

13. *(Currently Amended)* The device of claim 8, wherein at least one of the at least one linear (16) and/or the at least one nonlinear branch-circuits (18, 20) have a filtering circuit at an output terminal.

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14. (*Currently Amended*) The device of claim 10 [[8]], wherein the at least one phase control unit comprises at least one transmission line (204) or at least one controlled resistive element (326).

15. (*Previously Presented*) The device of claim 8, wherein the circuit is integrated with a semiconductor device.